

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): ~~Method~~ A method for manufacturing an actuation system for an optical component, the method comprising:

[[-]] etching of a first face [[(51)]] of a component to form pads (14, 54, 154),

[[-]] etching of a second face [[(53)]] of ~~the said~~ component to expose a flexible or deformable membrane (12, 52, 152) made of the same material as the pads, and

~~{ - production of producing~~ actuation means (16, 17, 30, 32, 56, 57) of the pads and membrane.

Claim 2 (Currently Amended): ~~Method~~ The method according to claim 1, ~~the~~ wherein said membrane and ~~the said~~ pads ~~having have~~ a total thickness less than 30 μm , or between 5 μm and 15 μm .

Claim 3 (Currently Amended): ~~Method~~ The method according to claim 1 ~~or 2~~, ~~the~~ wherein said membrane ~~having~~ and said pads have a total thickness between [[1]] 5 μm and [[5]] 15 μm .

Claim 4 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 3~~ Claim 1, ~~the~~ wherein said component ~~being is~~ made from a semiconducting material or glass [[(51)]], and ~~being is~~ provided with a surface layer [[(60)]] of semiconducting material or nitride in which the pads and membrane are etched.

Claim 5 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1~~

to ~~4~~ claim 1, ~~the wherein said component being is~~ of the SOI type comprising a surface layer of silicon ~~[[(501)]]~~, an insulating layer ~~[[(502)]]~~ and a substrate ~~[[(503)]]~~, the pads and the membrane being made in the surface layer of silicon.

Claim 6 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 3~~ claim 1, ~~the wherein said component being is~~ a silicon substrate covered by an insulating layer and a layer of polysilicon or a silicon substrate covered by a nitride layer, the pads and the membrane being made in the insulating or polysilicon or nitride layer respectively.

Claim 7 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 3~~ claim 1, ~~the wherein said component being is~~ a silicon substrate doped on two sides ~~(151, 153)~~, the membrane and the pads being made in portions ~~(152, 153)~~ that are doped differently from each other.

Claim 8 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 7~~ claim 1, ~~the wherein said~~ actuation means ~~being is~~ of the electrical or magnetic or thermal or piezo-electric type.

Claim 9 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 7~~ claim 1, ~~the wherein said~~ actuation means ~~being is~~ of the electrical type and ~~comprising~~ comprises one or several mobile electrodes ~~(16, 56)~~, connected to ~~the said pads of the device~~, and one or several fixed electrodes ~~(17, 57)~~.

Claim 10 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 7~~ claim 1, ~~the wherein said~~ actuation means ~~being is~~ of the magnetic type and ~~comprising~~

comprises one or several mobile coils ~~[[30]]~~ or magnets, connected to the pads of the device, and one or several fixed magnets ~~[[32]]~~ or coils.

Claim 11 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 10~~ claim 1, ~~also further~~ comprising a step for making a first part ~~[[56]]~~ of ~~the said~~ actuation means on the pads.

Claim 12 (Currently Amended): ~~Method~~ The method according to claim 11, ~~also further~~ comprising an assembly step with a second substrate ~~[[58]]~~ on which a second part ~~[[57]]~~ of ~~the said~~ actuation means is made, which cooperates with the first part to actuate ~~the said~~ pads and ~~the said~~ membrane.

Claim 13 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 10~~ claim 1, ~~the wherein said~~ actuation means (16, 17, 30, 32, 56, 57) ~~being~~ is performed in an assembly step of ~~the said~~ membrane and pads with a second substrate ~~[[58]]~~ on which ~~these said~~ means were previously formed.

Claim 14 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 13~~ claim 1, ~~the wherein said~~ pads ~~having~~ have a width or a width base less than 2 μm .

Claim 15 (Currently Amended): ~~Method~~ The method according to ~~one of claims 1 to 14~~ claim 1, ~~the wherein said~~ pads ~~having~~ have a height / width ratio less than 20.

Claim 16 (Currently Amended): ~~Method~~ The method for making an optical component comprising production of an actuation system according to ~~one of claims 1 to 15~~ claim 1, ~~and further comprising~~ formation of reflecting means on the membrane.

Claim 17 (Currently Amended): ~~Mechanical~~ A mechanical actuation system, for an optical component, comprising:

[[-]] a membrane (~~12, 52, 152~~) provided with pads (~~14, 54, 154~~) formed integrally with the said membrane on one of its faces, the said pads or the said membrane being made:

[[•]] in a surface layer ~~[(60)]~~ made of semiconducting material or nitride, formed on a semiconducting material or glass ~~[(50)]~~,

[[•]] or in the silicon surface layer ~~[(501)]~~ of an SOI type component,

[[•]] or in a polysilicon or nitride surface layer deposited either directly on a substrate, or on an insulating layer itself deposited on a substrate,

[[•]] or in differently doped zones (~~152, 153~~) of a semiconducting substrate ~~[[.]]~~ and

[[-]] actuation means (~~16, 17, 30, 32, 56, 57~~) of the said pads and said membrane.

Claim 18 (Currently Amended): ~~System~~ The system according to claim 17, ~~the~~ wherein said membrane and said pads ~~having~~ have a total thickness less than 30µm or between 5µm and 30µm.

Claim 19 (Currently Amended): ~~System~~ The system according to claim 17 ~~or 18~~, ~~the~~ flexible wherein said membrane ~~having~~ has a thickness between 1 µm and 5 µm.

Claim 20 (Currently Amended): ~~System~~ The system according to ~~one of claims 17 to 19~~ claim 17, ~~the~~ wherein said membrane ~~being~~ is flexible.

Claim 21 (Currently Amended): ~~System~~ The system according to ~~one of claims 17 to 20 claim 17, the wherein said~~ actuation means ~~being~~ is of the electrical or magnetic or thermal type.

Claim 22 (Currently Amended): ~~System~~ The system according to ~~one of claims 17 to 20 claim 17, the wherein said~~ actuation means ~~being~~ is of the electrical type and ~~comprising~~ comprises one or several mobile electrodes ~~(16, 56)~~, connected to the said pads ~~of the device~~, and one or several fixed electrodes ~~(17, 57)~~.

Claim 23 (Currently Amended): ~~System~~ The system according to ~~one of claims 17 to 20 claim 17, the wherein said~~ actuation means ~~being~~ is of the magnetic type and ~~comprising~~ comprises one or several mobile coils or magnets[[(30)]], connected to the pads of the device, and one or several fixed magnets or coils[[(32)]].

Claim 24 (Currently Amended): ~~System~~ The system according to ~~one of claims 17 to 23 claim 17, the wherein said~~ pads ~~having~~ have a width or width base less than 2 μm .

Claim 25 (Currently Amended): ~~System~~ The system according to ~~one of claims 17 to 24 claim 17, the wherein said~~ pads ~~having~~ have a height / width ratio less than 20.

Claim 26 (Currently Amended): ~~Optical~~ An optical component comprising an actuation system according to ~~one of claims 17 to 25 claim 17~~, and reflecting means on the membrane.

Claim 27 (New): The method according to claim 1, wherein said membrane has a thickness of between 1 μm and 5 μm .